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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,507	01/02/2002	Jordan J. Hopkins	340058.544	5460

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EXAMINER

HEWITT, JAMES M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,507

Applicant(s)

HOPKINS ET AL.

Examiner

James M Hewitt

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/29/03, 6/2/03 and 9/12/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14, 15, 17 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 9, 14, 17 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 10-12 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 6/2/03 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

The drawings were received on 9/12/03. These drawings are acceptable.

Claim Objections

Claims 17 and 21-24 are objected to because of the following informalities:

In claim 17 lines 6-7, the phrase "a tapered mouth" should be replaced with "a tapered mouth of the first tapered engagement portion" for the sake of clarity.

Appropriate correction is required.

Note that for examination purposes, claims 17 and 21-24 have been interpreted as if the above suggested change has been incorporated.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, the phrase "of a like metallic material" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed, thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 14, 17, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haibara (US 6,045,162) in view of Hashimoto (US 5,172,939).

With respect to claim 9 and with particular reference to Figure 5, Haibara discloses a fitting (8) for sealing a fluid (i.e. oil or fuel) between the fitting and a vessel (1), without requiring an insert therebetween, the vessel (1) having a vessel bore (1-1) extending along a longitudinal axis (in Figure 5, the vertical axis along the bore), the vessel bore terminating in a tapered mouth (3) for engaging the fitting, the tapered

Art Unit: 3679

mouth being radially symmetric about the longitudinal axis and comprising a metallic material for contacting the fitting, the fitting comprising: a fitting bore (8-2) extending along a radial axis (in Figure 5, the vertical axis along the bore 8-2) and terminating in a tapered engagement portion (6), the tapered engagement portion being radially symmetric about the radial axis, the tapered engagement portion being sized and shaped to sealingly contact the tapered mouth when the longitudinal axis is aligned with the radial axis and the fitting is urged against the vessel, a contact region between the vessel and the fitting forming a circular seal that is radially symmetric about both the longitudinal axis and the radial axis, the circular seal having a tangential contact angle measuring between 40 and 68 degrees from the longitudinal and radial axes. Refer to column 6 lines 36-40. Haibara fails to teach that the pressure of the fluid (oil or fuel) is greater than or equal to 15,000 psi, though it should be noted from Haibara's disclosure that his device is used to pass high pressure oil or fuel in a Diesel internal combustion engine (see col. 1 lines 7-16). Hashimoto is drawn to a very similar device, connecting a branch tube to a fuel rail, wherein the device passes fuel under a pressure exceeding 14,220 psi to an internal combustion diesel engine (see col. 1 lines 7-13). In view of Hashimoto's teaching, it is evident that Haibara's device is used with fuels having pressures exceeding 14,220 psi (which is considered to include pressure at or above 15,000 psi), and it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ Haibara's device with such fuels.

With respect to claim 14, wherein the contact angle measures between 50 and 59 degrees from the longitudinal and radial axes. Refer to column 6 lines 36-40.

Art Unit: 3679

With respect to claim 17, Haibara discloses a vessel (1) formed of a metallic material for containing high pressure fluid, the vessel being sealed by a fitting (8) of a like metallic material, without requiring an insert therebetween, the fitting (8) having a first tapered engagement portion (6) for engaging the vessel along a coupling axis (vertical axis in Figure 5 along bore 8-2 and bore 1-1), the vessel comprising: a second tapered engagement portion (3) shaped to sealingly contact a tapered mouth of the first tapered engagement portion (6) in a circular seal, the circular seal having a tangential contact angle measuring between 40 and 68 degrees (refer to column 6 lines 36-40) from the coupling axis, and a device (4) for maintaining the first tapered engagement portion in sealing contact with the second tapered engagement portion such that the engagement, the engagement portion shape, and the contact angle combine to substantially reduce relative motion during operation. The fastening nut, the engagement between the first and second engagement portions, the complementary shape of the engagement portion and the contact angle all are considered to contribute to reduce relative motion between the vessel (1) and fitting (8). Haibara fails to teach that the pressure of the fluid (oil or fuel) is greater than or equal to 15,000 psi, though it should be noted from Haibara's disclosure that his device is used to pass high pressure oil or fuel in a Diesel internal combustion engine (see col. 1 lines 7-16). Hashimoto is drawn to a very similar device, connecting a branch tube to a fuel rail, wherein the device passes fuel under a pressure exceeding 14,220 psi to an internal combustion diesel engine (see col. 1 lines 7-13). In view of Hashimoto's teaching, it is evident that Haibara's device is used with fuels having pressures exceeding 14,220 psi (which is

Art Unit: 3679

considered to include pressure at or above 15,000 psi), and it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ Haibara's device with such fuels.

With respect to claim 22, wherein the tangential contact angle is between 50 and 59 degrees from the coupling axis. Refer to column 6 lines 36-40.

With respect to claim 24, wherein the second tapered engagement portion is radially symmetric with respect to the coupling axis. Refer to Figure 5.

Allowable Subject Matter

Claims 1-8 and 25-26 are allowed.

Claims 10-12 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21 and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

It should first be noted that the claim rejections made under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) in view of Hashimoto (US 5,172,939) in the office action mailed 5/13/03 have been withdrawn in view of applicant's amendments to the claims and

Art Unit: 3679

applicant's arguments presented on pages 13-16 of paper number 14, and the declaration of Jordan J. Hopkins (paper number 15).

Applicant's arguments with respect to the claim rejections made under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) in view of Hashimoto (US 5,172,939) in the office action mailed 5/13/03 however are considered moot in view of the new ground(s) of rejection. Refer to the above 35 U.S.C. 103 rejections.

Applicant's arguments with respect to the rejection of claims 3, 14 and 22 (broad range together with a narrow range) have been fully considered and are persuasive, especially in view of MPEP 2173.05(c). This rejection has thus been withdrawn.

Applicant's arguments with respect to the rejection of claim 17 ("of a like metallic material") under 35 U.S.C. 112 2nd paragraph have been fully considered and are not found persuasive. In the second paragraph of page 12 of the amendment filed 9/12/03, Applicant asserts "the phrase 'of a like metallic material' is sufficiently defined in the specification and therefore not indefinite." This alleged definition is provided in the first paragraph of page 4 of the specification, and is as follows: "Each of the components in the assembly 100 can be manufactured from like materials, such as stainless steel." Applicant also submits "One skilled in the art will appreciate that the term 'like' refers to materials having similar material properties, for example strength, density, modulus of elasticity, etc." In response, the examiner acknowledges that the specification provides an example of what applicant considers as like metallic materials, i.e. various types of stainless steel, but it fails to adequately define *like* metallic materials. It is impossible to ascertain what other types of metals would be considered alike. It is understood that

Art Unit: 3679

like metallic materials would have certain similar properties, but which and how many properties would have to be similar in order for the materials to be alike? The phrase is subjective, even to the skilled artisan, and leaves the scope of the claim "open" if you will, and not definite, as is required by 35 U.S.C. 112 2nd paragraph. This rejection is thus maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

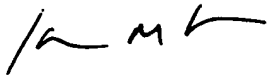
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hewitt whose telephone number is 703-305-0552. The examiner can normally be reached on M-F, 930am-600pm.

Art Unit: 3679

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



James M. Hewitt
Patent Examiner
Technology Center 3600